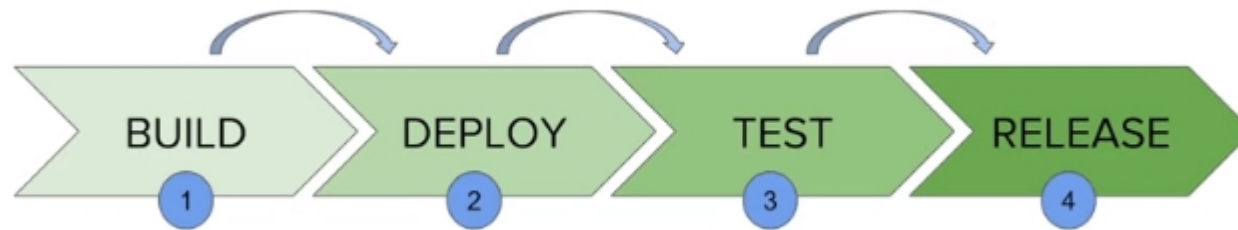# Topic 7: Build and Testing In Jenkins

Introducting Maven

Jenkins Pipeline is a combination of plugins that supports integration and implementation of continuous delivery pipelines. It has an extensible automation server to create simple and complex delivery pipelines as code via pipeline DSL. A Pipeline is a group of events interlinked with each other in a sequence.

What is Pipeline ?

In a Jenkins pipeline, every job or event has some sort of dependency on at least one or more events.

Working of Jenkins Continuous Delivery Pipelines

JenkinsFile

Jenkins pipelines can be defined using a text file called JenkinsFile. You can implement pipeline as code using JenkinsFile, and this can be defined by using a domain specific language (DSL). With JenkinsFile, you can write the steps needed for running a Jenkins pipeline.

Type of pipeline

Declarative:

Declarative pipeline syntax offers an easy way to create pipelines. It contains a predefined hierarchy to create Jenkins pipelines. It gives you the ability to control all aspects of a pipeline execution in a simple, straight-forward manner.

Scripted:

Scripted Jenkins pipeline runs on the Jenkins master with the help of a lightweight executor. It uses very few resources to translate the pipeline into atomic commands.

Jenkins Pipeline Concepts

Pipeline: The pipeline is a set of instructions given in the form of code for continuous delivery and consists of instructions needed for the entire build process.

Node: The machine on which Jenkins runs is called a node. A node block is mainly used in scripted pipeline syntax.

Stage: A stage block contains a series of steps in a pipeline. Generally, a stage block is used to visualize the Jenkins pipeline process.

Step: A step is nothing but a single task that executes a specific process at a defined time. A pipeline involves a series of steps.